

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-15. (Canceled)

16. (Currently Amended) A method for ~~forming an active matrix circuit manufacturing a~~
device comprising a pixel region and a drive circuit, each comprising a transistor, with the drive
circuit being connected to provide a drive signal to the transistor of the pixel region, said method
comprising:

forming, at least in the pixel region, an active layer comprising a plurality of
semiconductor islands arranged in parallel to each other over a substrate;

doping a p-type impurity into said active layer by ion doping to form a source region and
a drain region in said active layer, said active layer comprising a part to become a channel region
between said source region and said drain region;

forming a gate electrode adjacent to said part to become said channel region;

activating said p-type impurity by annealing;

forming an interlayer insulating film comprising a silicon nitride layer and a silicon oxide
layer over said active layer by plasma CVD, said silicon nitride layer and said silicon oxide layer
formed over said gate electrode and said active layer; and

forming a conductive layer comprising titanium and aluminum over said interlayer
insulating film,

wherein said transistor of said ~~active matrix circuit~~ pixel region comprises said channel
region and said gate electrode and said source region and said drain region.

17. (Currently Amended) A method according to claim 16 wherein said ~~active matrix~~
~~circuit is incorporated into device comprises~~ a liquid-crystal display.

18. (Currently Amended) A method according to claim 16 wherein said ~~active matrix circuit is incorporated into~~ device comprises an image sensor.

19. (Currently Amended) A method according to claim 16 wherein said ~~active matrix circuit is incorporated into~~ device comprises a liquid-crystal electro-optical device.

20. (Previously Presented) A method according to claim 16 wherein each of said semiconductor islands comprises amorphous semiconductor and has a plane area of $1000\text{ }\mu\text{m}^2$ or less.

21. (Previously Presented) A method according to claim 20 further comprising crystallizing said amorphous semiconductor.

22. (Currently Amended) A method for ~~forming an active matrix circuit~~ manufacturing a device comprising a pixel region and a drive circuit, each comprising a transistor, with the drive circuit being connected to provide a drive signal to the transistor of the pixel region, said method comprising:

forming, at least in the pixel region, an active layer comprising a plurality of semiconductor islands arranged in parallel to each other over a substrate;

doping a p-type impurity into said active layer by ion doping to form a p-type impurity region in said active layer, said active layer comprising a part to become a channel region adjacent to said p-type impurity region;

forming a gate electrode adjacent to said part to become said channel region;

activating said p-type impurity by annealing;

forming an interlayer insulating film comprising a silicon nitride layer and a silicon oxide layer over said active layer by plasma CVD, said silicon nitride layer and said silicon oxide layer formed over said gate electrode and said active layer; and

forming a conductive multi-layer film comprising a titanium layer and an aluminum layer over said interlayer insulating film,

wherein said transistor of said ~~active matrix circuit~~ pixel region comprises said channel region and said gate electrode and said p-type impurity region.

23. (Currently Amended) A method according to claim 22 wherein said ~~active matrix circuit is incorporated into~~ device comprises a liquid-crystal display.

24. (Currently Amended) A method according to claim 22 wherein said ~~active matrix circuit is incorporated into~~ device comprises an image sensor.

25. (Currently Amended) A method according to claim 22 wherein said ~~active matrix circuit is incorporated into~~ device comprises a liquid-crystal electro-optical device.

26. (Previously Presented) A method according to claim 22 wherein each of said semiconductor islands comprises amorphous semiconductor and has a plane area of $1000\ \mu\text{m}^2$ or less.

27. (Previously Presented) A method according to claim 26 further comprising crystallizing said amorphous semiconductor.

28. (Currently Amended) A method for ~~forming an active matrix circuit~~ manufacturing a device comprising a pixel region and a drive circuit, each comprising a transistor, with the drive circuit being connected to provide a drive signal to the transistor of the pixel region, said method comprising:

forming, at least in the pixel region, an active layer comprising a plurality of semiconductor islands arranged in parallel to each other over a substrate;

doping a p-type impurity into said active layer by ion doping to form a p-type impurity region in said active layer, said active layer comprising a part to become a channel region adjacent to said p-type impurity region;

forming a gate electrode adjacent to said part to become said channel region;

activating said p-type impurity by annealing;

forming an interlayer insulating film comprising a silicon nitride layer and a silicon oxide layer over said active layer by plasma CVD, said silicon nitride layer and said silicon oxide layer formed over said gate electrode and said active layer; and

forming a conductive layer comprising titanium and aluminum over said interlayer insulating film,

wherein said transistor of said ~~active matrix circuit~~ pixel region comprises said channel region and said gate electrode and said p-type impurity region.

29. (Previously Presented) A method according to claim 28 wherein said conductive layer comprises an electrode.

30. (Previously Presented) A method according to claim 28 wherein said conductive layer comprises a wiring.

31. (Currently Amended) A method according to claim 28 wherein said ~~active matrix circuit is incorporated into~~ device comprises a liquid-crystal display.

32. (Currently Amended) A method according to claim 28 wherein said ~~active matrix circuit is incorporated into~~ device comprises an image sensor.

33. (Currently Amended) A method according to claim 28 wherein said ~~active matrix circuit is incorporated into~~ device comprises a liquid-crystal electro-optical device.

34. (Previously Presented) A method according to claim 28 wherein each of said semiconductor islands comprises amorphous semiconductor and has a plane area of $1000\ \mu\text{m}^2$ or less.

35. (Previously Presented) A method according to claim 34 further comprising crystallizing said amorphous semiconductor.

36. (Previously Presented) A method according to claim 28 wherein said conductive layer comprises a multi-layer film including a titanium layer and an aluminum layer.

37-45. (Canceled)

46. (Currently Amended) A method for ~~forming an active matrix circuit~~ manufacturing a device comprising a pixel region and a drive circuit, each comprising a transistor, with the drive circuit being connected to provide a drive signal to the transistor of the pixel region, said method comprising:

forming, at least in the pixel region, an active layer comprising a plurality of semiconductor islands arranged in parallel to each other over a substrate;

doping a p-type impurity into said active layer by ion doping to form a source region and a drain region in said active layer, said active layer comprising a part to become a channel region between said source region and said drain region;

forming a gate electrode adjacent to said part to become said channel region;

activating said p-type impurity by annealing;

forming a first interlayer insulating film comprising a silicon nitride layer and a silicon oxide layer over said active layer by plasma CVD, said silicon nitride layer and said silicon oxide layer formed over said gate electrode and said active layer;

forming a conductive layer comprising a titanium and an aluminum over said first interlayer insulating film;

forming a second interlayer insulating film over said conductive layer; and

forming a pixel electrode over said second interlayer insulating film,

wherein said transistor of said ~~active matrix circuit~~ pixel region comprises said channel region and said gate electrode and said source region and said drain region.

47. (Currently Amended) A method according to claim 46 wherein said ~~active matrix circuit is incorporated into~~ device comprises a liquid crystal display.

48. (Currently Amended) A method according to claim 46 wherein said ~~active matrix circuit is incorporated into~~ device comprises an image sensor.

49. (Previously Presented) A method according to claim 46 wherein each of said semiconductor islands comprises amorphous semiconductor and has a plane area of $1000\ \mu\text{m}^2$ or less.

50. (Previously Presented) A method according to claim 49 further comprising crystallizing said amorphous semiconductor.

51. (Currently Amended) A method for ~~forming an active matrix circuit~~ manufacturing a device comprising a pixel region and a drive circuit, each comprising a transistor, with the drive circuit being connected to provide a drive signal to the transistor of the pixel region, said method comprising:

forming, at least in the pixel region, an active layer comprising a plurality of semiconductor islands arranged in parallel to each other over a substrate;

doping a p-type impurity into said active layer by ion doping to form a source region and a drain region in said active layer, said active layer comprising a part to become a channel region between said source region and said drain region;

forming a gate electrode adjacent to said part to become said channel region;

activating said p-type impurity by annealing;

forming a first interlayer insulating film comprising a silicon nitride layer and a silicon oxide layer over said active layer by plasma CVD, said silicon nitride layer and said silicon oxide layer formed over said gate electrode and said active layer;

forming a conductive layer comprising a titanium and an aluminum over said first interlayer insulating film;

forming a second insulating film comprising silicon oxide over said conductive layer; and

forming a pixel electrode over said second insulating film,

wherein said transistor of said ~~active matrix circuit~~ pixel region comprises said channel region and said gate electrode and said source region and said drain region.

52. (Currently Amended) A method according to claim 51 wherein said ~~active-matrix circuit is incorporated into~~ device comprises a liquid crystal display.

53. (Currently Amended) A method according to claim 51 wherein said ~~active-matrix circuit is incorporated into~~ device comprises an image sensor.

54. (Previously Presented) A method according to claim 51 wherein each of said semiconductor islands comprises amorphous semiconductor and has a plane area of $1000\ \mu\text{m}^2$ or less.

55. (Previously Presented) A method according to claim 54 further comprising crystallizing said amorphous semiconductor.

56. (Currently Amended) A method for ~~forming an active-matrix circuit~~ manufacturing a device comprising a pixel region and a drive circuit, each comprising a transistor, with the drive circuit being connected to provide a drive signal to the transistor of the pixel region, said method comprising:

forming, at least in the pixel region, an active layer comprising a plurality of semiconductor islands arranged in parallel to each other over a substrate;

doping a p-type impurity into said active layer by ion doping to form a source region and a drain region in said active layer, said active layer comprising a part to become a channel region between said source region and said drain region;

forming a gate electrode adjacent to said part to become said channel region;

activating said p-type impurity by annealing;

forming a first interlayer insulating film comprising a silicon nitride layer and a silicon oxide layer over said active layer by plasma CVD, said silicon nitride layer and said silicon oxide layer formed over said gate electrode and said active layer;

forming a conductive layer comprising a titanium and an aluminum over said first interlayer insulating film;

forming a second insulating film comprising silicon oxide over said conductive layer; and

forming a pixel electrode comprising indium tin oxide over said second insulating film, wherein said transistor of said ~~active matrix circuit~~ pixel region comprises said channel region and said gate electrode and said source region and said drain region.

57. (Currently Amended) A method according to claim 56 wherein said ~~active matrix circuit is incorporated into~~ device comprises a liquid crystal display.

58. (Currently Amended) A method according to claim 56 wherein said ~~active matrix circuit is incorporated into~~ device comprises an image sensor.

59. (Previously Presented) A method according to claim 56 wherein said semiconductor layer comprises an amorphous semiconductor island having each of said semiconductor islands comprises amorphous semiconductor and has a plane area of $1000 \mu\text{m}^2$ or less.

60. (Previously Presented) A method according to claim 59 further comprising crystallizing said amorphous semiconductor.